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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/706,885	11/12/2003	Takao Kuromiya	MAT-8482US	7373

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EXAMINER

KOCH, GEORGE R

ART UNIT	PAPER NUMBER
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1734

DATE MAILED: 03/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/706,885

Applicant(s)

KUROMIYA, TAKAO

Examiner

George R. Koch III

Art Unit

1734

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 January 2005.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 2, 4-7 and 10 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1, 2, 4-7, 10 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

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DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

2. Claims 1 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP4-363167 and JP 10005660 A (cited in the IDS filed 11/12/2003).

JP4-363167 discloses an extrusion type nozzle comprising a block (items 1A) having a manifold for distributing liquid along a coating width (see Figure 1 for the width), a slit (defined as the gap between items 1A on one side and 1A and 1B on the other) for allowing the liquid distribute in the manifold to pass therethrough, and a discharge outlet (item 3) for discharging the liquid from the slit, the slit including a first portion and a second portion provided closer to said discharge outlet than the first portion (both slits are visible in Figure 4), and a first forming member (item 1B) for forming a wall of the first portion of the slit, the first forming member being displaceable to change a gap of the first portion of the slit.

JP4-363167 does not disclose that a length of the first forming member varies along a width of the first forming member, said length in a direction of discharging said liquid.

JP 10005660 A discloses that a length of the first forming member (taper block 14) varies along a width of the first forming member, said length in a direction of

discharging said liquid (see solution). JP 10005660 A discloses that the taper block's shape can be used to ensure that the coating quantity in a lateral direction can be uniformized, i.e. adjusted (see solution). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have utilized such a variable length first forming member in order to adjust the coating quantity.

As to claim 4, JP4-363137 discloses a displacing mechanism (items 5) which is capable of tilting the first forming member along the coating width.

3. Claims 1-2 and 4-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ulcej (US Patent 6,206,680 B1) and JP 10005660 A.

Ulcej discloses, in the prior art section, an extrusion type nozzle comprising a block (items 12B and 12) having a manifold for distributing liquid along a coating width (the portion of the gap between the blocks "above" members 22 and 24, relative to the outlet), a slit (defined as the gap between items 12 on one side and 12B on the other) for allowing the liquid distribute in the manifold to pass therethrough, and a discharge outlet (visible in Figure 1) for discharging the liquid from the slit, the slit including a first portion and a second portion provided closer to said discharge outlet than the first portion (both slits are visible in Figure 1, especially the thicker slit which is at the location of 35), and a first forming member (item 22) for forming a wall of the first portion of the slit, the first forming member being displaceable to change a gap of the first portion of the slit.

Ulcej does not disclose that a length of the first forming member varies along a width of the first forming member, said length in a direction of discharging said liquid.

JP 10005660 A discloses that a length of the first forming member (taper block 14) varies along a width of the first forming member, said length in a direction of discharging said liquid (see solution). JP 10005660 A discloses that the taper block's shape can be used to ensure that the coating quantity in a lateral direction can be uniformized, i.e. adjusted (see solution). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have utilized such a variable length first forming member in order to adjust the coating quantity.

As to claim 2, the forming member of Ulcej (item 22) is moveable, and thus exchangeable.

As to claim 4, Ulcej discloses a displacing mechanism (items 32) which is capable of tilting the first forming member along the coating width.

As to claim 5, Ulcej discloses a that the slit further includes a third portion (the upper portion relative to the outlet) closer to the manifold than the first portion, the nozzle further comprising a second forming member (item 24) for forming a a wall of the third portion of the slit. This second forming member is moveable, and thus exchangeable.

As to claim 6, Ulcej discloses a second forming member (item 24) which forms a wall of the manifold, the second forming member capable of being displaceable to change an area of a cross section of the manifold perpendicular to the coating width.

As to claim 7, Ulcej discloses a second displacing mechanism (the second item 32) which is capable of tilting the second forming member along the coating width.

4. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kamikihara (US Patent 6,344,088) in view of Ulcej (US 6,206,680) and JP 10005660 A.

Kamikihara discloses a coating apparatus comprising an extrusion type nozzle (item 18, Figure 21) with forming members (item 16 and attached structures), a measuring unit (item 38) for measuring the thickness, and a controller for controlling the amount of displacement of a moving member (item 16) according to the measured value (item 36, and see columns 13-15).

Kamikihara discloses that the extrusion type nozzle uses a moving member to merely adjust the outlet and does not use a nozzle with a forming member to change the cross section of the manifold.

Ulcej discloses, in the prior art section, an extrusion type nozzle comprising a block (items 12B and 12) having a manifold for distributing liquid along a coating width (the portion of the gap between the blocks "above" members 22 and 24, relative to the outlet), a slit (defined as the gap between items 12 on one side and 12B on the other) for allowing the liquid distribute in the manifold to pass therethrough, and a discharge outlet (visible in Figure 1) for discharging the liquid from the slit, the slit including a first portion and a second portion provided closer to said discharge outlet than the first portion (both slits are visible in Figure 1, especially the thicker slit which is at the location of 35), and a first forming member (item 22) for forming a wall of the first portion

of the slit, the first forming member being displaceable to change a gap of the first portion of the slit. Ulcej discloses that the forming members are necessary to influence the flow to obtain a product at the die exit having desirable qualities (see column 1, lines 13-16). Therefore, it would have been obvious to one of ordinary skill in the art to have utilized forming members as in Ulcej's prior art section in order to influence the flow to obtain a product at the die exit having desirable qualities.

Neither Kamikihara nor Ulcej disclose that a length of the first forming member varies along a width of the first forming member, said length in a direction of discharging said liquid.

JP 10005660 A discloses that a length of the first forming member (taper block 14) varies along a width of the first forming member, said length in a direction of discharging said liquid (see solution). JP 10005660 A discloses that the taper block's shape can be used to ensure that the coating quantity in a lateral direction can be uniformized, i.e. adjusted (see solution). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have utilized such a variable length first forming member in order to adjust the coating quantity.

Conclusion

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to George R. Koch III whose telephone number is (571) 272-1230 (TDD only). If the applicant cannot make a direct TDD-to-TDD call, the applicant can communicate by calling the Federal Relay Service at 1-866-377-8642 and giving the operator the above TDD number. The examiner can normally be reached on M-Th 10-7.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christopher Fiorilla can be reached on (571) 272-1187. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



George R. Koch III
Patent Examiner
Art Unit 1734

GRK
3/12/2005



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